

ENROLLMENT BEHAVIOR AND EDUCATIONAL FEE POLICY

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Abstract

The likely effects of educational fee policies on undergraduate enrollment and fee revenue are explored by examining two methods of charging educational fees: a plateau or flat-fee system and a linear system. Two very different campuses of a university system have been chosen to demonstrate these effects. The results indicate distinct differences in enrollment behavior between the two methods and also between the effects experienced at two campuses serving distinctly different student bodies.

ENROLLMENT BEHAVIOR AND EDUCATIONAL FEE POLICY

Introduction

The subject of fee policies at higher education institutions has been one of much concern and debate on campuses since the late 1980s. The educational fee pricing method chosen by an institution can have an impact on many areas of a college or university, including enrollment, distribution of student credit hours (SCH), the amount of revenue from fees, and students' time to completion. The two primary methods of charging fees are a plateau or flat-fee system and a linear system.

At the University of Missouri, the debate over student fee pricing has led to several policy changes over the past fifteen years. These changes provide an excellent basis upon which to study the consequences of fee policy. In the early 1980s, the University used a combination of the two methods, charging per credit hour up to 11 hours and a flat rate for enrollment at or above a plateau of 12 hours. In fall 1983, the plateau was increased from 12 hours to 14, meaning students would pay for 2 more credit hours than they had the previous semester for a load of 15 hours or more.

One of the main advantages of a plateau system is that it gives students the opportunity to take classes for personal enrichment without adding to their educational costs. This allows the student a more well-rounded and balanced education, rather than an education solely in his or her major. In addition, the plateau system in theory should lessen students' time to degree completion. A student may be more inclined to take an increased course load if he or she does not have to pay for the additional hours. More student credit hours completed each semester should equate to a shortened time to degree completion. From the institution's viewpoint, a plateau system could be an advantage in that it discourages part-time enrollment, providing a more stable student body and better forecasting of fees. On the other hand, it has been argued that a plateau system also encourages students to shop for courses, enrolling in more courses than they plan to complete. This phenomenon increases an institution's costs in that sections are added to accommodate students, but when the semester's drops are completed, the college or university finds they do not actually need the extra sections. Once students are enrolled in a section, the institution may be

forced to continue it although it is not needed. The university assumes the burden of cost for these extra sections, while the student bears no cost.

As a result of a 1985 Student Fee Task Force recommendation, the University abandoned the plateau system in 1986 in favor of a linear system. The Task Force, which submitted its final report in May 1985, proposed a fee policy based on fixed per-credit-hour rates. The reasoning behind this recommendation was a belief that “higher student credit hour loads require more resources and impose additional costs on the University” (*Final Report of the Student Fee Task Force*, p. 10). In the interest of equity and fiscal responsibility, the Task Force recommended that these costs be reflected in student fees. In conjunction with this linear fee policy, the University set different rates for lower-division (freshman and sophomore) and upper-division (junior and senior) courses. Two reasons were given for this differentiation. First, the costs of instruction for upper-division courses were believed to be significantly higher than those for lower-division courses. The Task Force concluded that this cost differential should be reflected in the rate being charged. Secondly, lower fees for students at the entry level were thought to be useful in the University’s ability to attract students who might otherwise opt for lower cost alternatives for the first two years of college.

The recommendation of another Student Fee Task Force assembled in 1990 resulted in the University’s last major change in its method of charging student fees. The Task Force recommended in 1991 that, in order to keep fees as simple to understand as possible, undergraduate fee levels be set at a uniform rate. Differential pricing was discontinued in fall 1992 when the University began its current fee pricing policy of charging per credit hour.

The policy changes at the University of Missouri provide an opportunity to examine the effects of educational fee policy as it has utilized both of the primary fee structures with variations over the past fifteen years. The focus of this study is not to examine the effect of increased fees or the affordability of higher education, but rather to look at the various structures of fee policy and how they affect enrollment behavior. Previous analysis of the period 1982 through 1991 (*Student Load and Tuition Policy Report*, Steve Chatman, P&B 94-5) showed that when the University made the transition from a plateau system to

a linear system, student credit hour loads began to decline. A portion of this study will compare these previous findings to subsequent years to determine if these trends continued. Another portion of this paper will examine enrollments of the period 1991 through 1997, when the University saw a change from differentiated pricing to a system of one rate for each credit hour taken, regardless of level, to determine what effect this change had and to what degree a second fee policy change affected previous enrollment trends.

The University of Missouri is not the only institution to initiate changes in educational fee policy based on similar analyses of the plateau and linear systems. In fall 1991, after years of declining undergraduate credit hour loads in a linear fee structure, Indiana University adopted a flat-fee system for enrollment of twelve to seventeen credit hours. Like Missouri, Indiana University is a multi-campus system with a residential campus, an urban campus, as well as several other campuses. While the main residential campus in Bloomington adopted a flat-fee system, the other campuses remained on a per credit hour fee system. Since the change to a plateau fee policy in 1991, Indiana-Bloomington has experienced record highs each year in average credit hour loads at the undergraduate level, rising from 14.3 for full-time undergraduates in 1990-91 to 14.9 in 1997-98. The percentage of undergraduates taking 14 to 16 hours has risen from 56% in 1990-91 to 61% in 1997-98.

Each educational fee structure has its merits as well as its drawbacks. As a general rule, Ihlanfeldt (1981) cites the following as some of the objectives to be sought by any institution when deciding on a fee pricing system: 1) There should be no price disincentives to discourage students from taking additional courses to enhance their education; 2) Financial pressure on students to graduate earlier than they wish should be minimal; 3) Subsidization of nonaccelerating students by those students who have chosen to accelerate should be minimal; and 4) Management should seek simplicity, ease, and low cost of administration to save overhead costs for educational purposes. These goals should be kept in mind in weighing the effects of a policy to determine the best policy for each institution.

Method

This study examines undergraduate enrollment and fee policies at two very different campuses of a university system. The traditional residential campus, University of Missouri-Columbia, had an average undergraduate enrollment of about 17,000 students taking approximately 230,000 student credit hours (SCH) each fall from 1985 through 1997. The percentage of students enrolled full-time was around 91%. The University of Missouri-St. Louis, an urban campus, over this period had an average undergraduate enrollment of about 9,700 students taking approximately 97,000 SCH. The percentage of students enrolled full-time at UM-St. Louis was about 52%. Because their student body compositions are very different, one would expect the effects of educational fee policy, if there are any, to vary the greatest at these two campuses.

The effects of fee policy on enrollment will be examined for two time periods. The first analysis will compare data from fall 1985, the last year of a plateau system at the University, to subsequent fall semesters. This part of the analysis will focus on the differences between the distributions and numbers of SCH, students' times to degree completion, and differences in fee revenue in a plateau system and in a linear system. The second period is fall 1991 through fall 1997, during which a change was made from differential pricing for lower- and upper-division courses to a fee policy with uniform rates. Specifically, this analysis will examine the extent, if any, this change had on enrollments in the two divisions (upper and lower). In addition, consideration will be given to the question of whether fee policy changes applied uniformly across a university system have similar effects on different campuses.

Although it is acknowledged that many factors both internal and external to an institution have an effect on its enrollment, they are not the focus of this study. Personal circumstances, the availability of financial aid, general economic conditions, the rise in educational fees as related to inflation, and general trends in higher education are just some of the many factors that impact enrollment. However, the information presented here is designed to isolate educational fee policy and examine its individual effect on enrollment.

Results

The historical trends in distribution of student credit hours are shown in Table 1 and Table 2. Two policy changes are to be examined here. The first comparison to be made is between the distribution of credit hours in a flat-fee structure with a plateau of fourteen SCH with that in a linear system. The second policy change to be examined occurred between fall 1991 and fall 1992, when the University undifferentiated the rates for lower-division and upper-division courses.

- At UM-Columbia, the percentage of students taking fourteen hours or more declined sharply from 74% in 1985 to 61% in 1991. Likewise, there was a decrease in mean load from 14.2 SCH in 1985 to 13.5 in 1991. At UM-St. Louis, the urban campus, the changes were less drastic, but also showed a decrease in the percentage of students taking fourteen or more hours.
- The change to an undifferentiated pricing policy in fall 1992 did not appear to have an effect on overall student load at UM-Columbia, as distribution stayed fairly constant from 1991 through 1997. Similarly, the distribution of SCH at UM-St. Louis from 1991 to 1997 did not show much variation following the change to undifferentiated pricing.

**Table 1. Cumulative Percentage Distribution of Fall Semester Undergraduate Student Load
University of Missouri - Columbia**

# of SCH	Plateau = 14 SCH			Linear with Upper and Lower Division Rates						Straight Linear					
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
> or = 18	5	5	5	3	3	3	2	2	2	2	2	2	2	2	2
> or = 17	13	12	11	9	8	7	6	6	6	6	5	5	6	6	6
> or = 16	30	29	27	24	21	17	15	14	15	14	13	13	13	13	14
> or = 15	59	56	55	53	49	42	38	39	39	38	36	34	35	36	37
> or = 14	76	75	74	70	68	63	63	61	61	60	57	55	56	56	55
> or = 13	84	83	82	79	77	75	74	72	72	71	69	67	68	68	68
> or = 12	94	94	93	92	92	92	92	92	91	90	90	90	90	91	91
> or = 9	96	96	95	94	94	94	95	94	94	94	94	94	94	95	95
> or = 6	98	98	98	97	97	97	97	97	98	97	97	97	97	98	98
> or = 3	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Full-time (%)	94	94	93	92	92	92	92	92	91	90	90	90	90	91	91
Part-time (%)	6	6	7	8	8	8	8	8	9	10	10	10	10	9	9
Mean SCH	14.3	14.3	14.2	14.0	13.8	13.6	13.6	13.5	13.5	13.4	13.3	13.3	13.3	13.4	13.4
Change (%)		0.0%	-0.7%	-1.4%	-1.4%	-1.4%	0.0%	-0.7%	0.0%	-0.7%	-0.7%	0.0%	0.0%	0.8%	0.0%

**Table 2. Cumulative Percentage Distribution of Fall Semester Undergraduate Student Load
University of Missouri - St. Louis**

# of SCH	Plateau = 14 SCH			Linear with Lower and Upper Division Rates						Straight Linear					
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
> or = 18	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1
> or = 17	5	3	2	2	2	2	2	2	2	2	2	3	3	2	2
> or = 16	11	10	8	7	6	6	6	5	5	5	5	6	6	4	4
> or = 15	25	23	20	18	17	17	17	16	16	15	15	17	16	16	17
> or = 14	32	30	27	26	24	24	23	23	23	21	22	25	23	24	24
> or = 13	42	40	37	35	34	34	34	32	31	29	29	32	31	30	29
> or = 12	57	55	53	51	51	52	52	52	52	51	51	54	53	53	52
> or = 9	67	67	66	65	66	65	65	65	65	65	65	67	67	67	68
> or = 6	83	83	83	83	83	82	82	82	83	82	82	84	84	85	86
> or = 3	100	100	100	99	100	100	100	99	99	97	99	99	99	99	99
Full-time (%)	57	55	53	51	51	52	52	52	52	51	51	54	53	53	52
Part-time (%)	43	45	47	49	49	48	48	48	48	49	49	46	47	47	48
Mean SCH	10.4	10.3	10.2	10.1	10.0	10.0	10.0	9.9	9.9	9.8	9.9	10.1	10.1	10.1	10.1
Change (%)		-1.0%	-1.0%	-1.0%	-1.0%	0.0%	0.0%	-1.0%	0.0%	-1.0%	1.0%	2.0%	0.0%	0.0%	0.0%

Source: Student Load reports

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The mean loads in each division, lower and upper, are shown in Tables 3 and 4, along with the proportion of SCH and headcount enrolled in the upper division. An examination of the differences in enrollment behavior between the plateau and linear systems again show more profound changes at UMC than at UMSL. The policy change of 1992 which eliminated fee differentiation did not seem to have much of an effect on the overall distribution of SCH. However, when enrollments are viewed separately as lower-division and upper-division, the results are somewhat different.

- At UM-Columbia the 1985 mean load in each division (lower and upper) was nearly equal. With the change to a linear structure, not only did the average loads drop overall, but the gap between the mean load in the lower-division and that of the upper-division also widened, with the upper division enrollment dropping more steadily than that in the lower division. This trend continued through fall 1997.
- The mean loads in each division did not change at UM-St. Louis until 1994, when the average load in the upper-division increased slightly from 9.3 to 9.6 SCH. At the same time, the percentage of enrollment in the upper-division, which had grown tremendously since 1985, began to decline.

**Table 3. Fall Semester Undergraduate Credit Hour Enrollment by Level
University of Missouri - Columbia**

	Mean Load			% Upper Division	
	LD	UD	Total	SCH	HC
1983	14.4	14.3	14.4	45%	45%
1984	14.3	14.2	14.3	47%	48%
1985	14.3	14.1	14.2	47%	48%
1986	14.1	13.7	14.0	45%	46%
1987	14.0	13.6	13.8	44%	45%
1988	13.7	13.5	13.6	43%	44%
1989	13.7	13.4	13.6	43%	44%
1990	13.6	13.4	13.5	45%	45%
1991	13.7	13.3	13.5	48%	48%
1992	13.6	13.3	13.4	51%	52%
1993	13.5	13.2	13.3	52%	53%
1994	13.4	13.1	13.3	49%	50%
1995	13.6	13.1	13.3	46%	47%
1996	13.6	13.1	13.4	46%	47%
1997	13.6	13.2	13.4	49%	49%

**Table 4. Fall Semester Undergraduate Credit Hour Enrollment by Level
University of Missouri - St. Louis**

	Mean Load			% Upper Division	
	LD	UD	Total	SCH	HC
1983	11.6	9.4	10.4	48%	53%
1984	11.5	9.3	10.3	49%	54%
1985	11.4	9.3	10.2	53%	58%
1986	11.3	9.3	10.1	55%	60%
1987	11.2	9.3	10.0	57%	62%
1988	11.4	9.2	10.0	58%	63%
1989	11.5	9.2	10.0	60%	65%
1990	11.4	9.2	9.9	62%	67%
1991	11.4	9.3	9.9	65%	70%
1992	11.4	9.2	9.8	68%	72%
1993	11.4	9.3	9.9	70%	74%
1994	11.6	9.6	10.1	68%	72%
1995	11.4	9.6	10.1	68%	72%
1996	11.5	9.5	10.1	68%	72%
1997	11.4	9.6	10.1	67%	71%

Source: Student Load reports and DHE 02
Note: LD is lower division. UD is upper division.

Because the compositions of the two campuses are very different in terms of attendance, it is worthwhile to examine the effects of an undifferentiated fee structure on the proportion of full-time and part-time enrollment, as shown in Table 5 and Table 6.

- UM-Columbia had essentially no change in the distribution of part-time and full-time headcount enrollment in the lower-division from 1991 to 1997. Upper-division enrollment changed only slightly, with the percentage of part-time upper-division enrollment increasing slightly from 1992 to 1995 before declining back to previous levels in 1996 and 1997.
- The percentage enrolled in the upper division at UM-St. Louis increased following the fee policy change of 1992. However, this increase did not continue, and the proportions returned to previous levels by 1997.

**Table 5. Fall Semester Distribution of Headcount Enrollment by Level and Load
University of Missouri - Columbia**

	Year						
	1991	1992	1993	1994	1995	1996	1997
Lower Division							
Full-time	95%	94%	94%	94%	94%	95%	95%
Part-time	5%	6%	6%	6%	6%	5%	5%
Upper Division							
Full-time	88%	88%	87%	86%	85%	87%	88%
Part-time	12%	12%	13%	14%	15%	13%	12%

**Table 6. Fall Semester Distribution of Headcount Enrollment by Level and Load
University of Missouri - St. Louis**

	Year						
	1991	1992	1993	1994	1995	1996	1997
Lower Division							
Full-time	69%	71%	70%	71%	69%	71%	67%
Part-time	31%	29%	30%	29%	31%	29%	33%
Upper Division							
Full-time	44%	44%	45%	47%	47%	46%	45%
Part-time	56%	56%	55%	53%	53%	54%	55%

Source: DHE 02

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To address the issue of the effects of fee policy change on the University's student fee income, a simplified method was developed, using the fall 1985 semester as the basis of comparison, that would show the differential between what was actually experienced and what could have been expected had the University continued with a flat-fee structure. It is assumed in this model that total enrollment and year-to-year percentage increases in fees would have remained as were actually experienced, regardless of which policy was in place. A full-time load of fifteen credit hours under the linear fee structure would have been equal to the amount charged for a full load of fourteen SCH in the plateau structure. While this results in higher per credit hour rates than were actually experienced in the years the linear policy has been in effect, it ensures that the total fees for a full-time load increased by the appropriate percentage from year to year, maintaining a relative burden on part-time students who would still pay per credit hour in the plateau system. Tables 7 and 8 show actual versus model SCH and fee revenue for each campus.

- In the plateau model, UMC would have seen steady increases in both student credit hour enrollments and in revenue from student fees. However, the difference per student credit hour affects revenue negatively.
- UM-St. Louis also would have experienced increased student credit hours in the plateau system. The differences fluctuate from as much as 3,200 in 1992 to only 500 in 1994. Fee revenue in the model plateau structure shows an increase over actual revenue of about \$400,000 each year.

**Table 7. Fall Semester Fee Income Differential
University of Missouri - Columbia**

Fall	SCH (1,000s)			Fees (Millions \$)			Difference Per SCH
	Actual	Plateau	Difference	Actual	Plateau	Difference	
1985	245.0	245.0	0.0	11.2	11.2	0.0	\$0.00
1986	236.0	239.8	3.8	11.7	11.8	0.1	-0.22
1987	234.3	240.3	6.0	12.2	12.5	0.3	-0.23
1988	238.6	248.6	10.0	13.2	13.7	0.5	-0.25
1989	246.9	258.1	11.2	14.6	15.2	0.6	-0.26
1990	253.2	266.1	12.9	16.0	16.7	0.7	-0.28
1991	249.2	261.6	12.4	17.6	18.4	0.8	-0.32
1992	233.5	246.6	13.1	19.0	20.0	1.0	-0.36
1993	218.3	232.1	13.8	19.9	21.0	1.1	-0.41
1994	217.8	233.2	15.4	22.0	23.4	1.4	-0.45
1995	223.6	238.1	14.5	24.8	26.3	1.5	-0.50
1996	229.6	243.5	13.9	27.8	29.3	1.5	-0.54
1997	232.4	246.0	13.6	29.0	30.6	1.6	-0.56

**Table 8. Fall Semester Fee Income Differential
University of Missouri - St. Louis**

Fall	SCH (1,000s)			Fees (Millions \$)			Difference Per SCH
	Actual	Plateau	Difference	Actual	Plateau	Difference	
1985	95.2	95.2	0.0	4.5	4.5	0.0	\$0.00
1986	96.6	97.7	1.1	4.8	5.0	0.2	1.89
1987	98.4	100.1	1.7	5.1	5.4	0.3	1.99
1988	100.5	102.7	2.2	5.6	5.9	0.3	2.11
1989	105.0	107.0	2.0	6.2	6.6	0.4	2.26
1990	106.7	109.5	2.8	6.7	7.2	0.5	2.41
1991	103.7	106.3	2.6	7.3	7.8	0.5	2.69
1992	92.0	95.2	3.2	7.5	8.0	0.5	3.10
1993	92.3	95.3	3.0	8.4	9.0	0.6	3.47
1994	95.3	95.8	0.5	9.6	10.0	0.4	3.85
1995	95.3	96.3	1.0	10.6	11.1	0.5	4.23
1996	95.8	96.4	0.6	11.6	12.1	0.5	4.61
1997	93.8	94.6	0.8	11.7	12.3	0.6	4.75

Source: Student Load Reports and Comprehensive Fee Schedules

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The most striking results are shown in Tables 9 and 10 in an examination of students' time to degree completion in a plateau system and in a linear fee policy. The members of the fall 1981 freshman class enrolled and completed their degrees during a time when the plateau policy was in effect and set at fourteen SCH. The University first implemented its linear fee policy in fall 1986, so the freshmen classes of 1985 through 1991 were enrolled primarily under this fee structure.

- At both campuses, the freshman class of 1981 had a much larger percentage of students who graduated within four years. At UM-Columbia, 62% of graduates did so in four years in the plateau system compared to around 50% in the years in which a linear fee policy was in effect. At UM-St. Louis, the percentage of students graduating within four years was 40% in the plateau system compared to a range of 23 to 32% in the linear system.

**Table 9. Time to Degree Completion for Degree-Seeking Freshmen Who Graduate Within Six Years
University of Missouri - Columbia**

Completed in:	Plateau = 14 SCH			Linear with Upper and Lower Division Rates				Straight Linear					
	Fall 1979	Fall 1980	Fall 1981	Fall 1982	Fall 1983	Fall 1984	Fall 1985	Fall 1986	Fall 1987	Fall 1988	Fall 1989	Fall 1990	Fall 1991
	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class
	As of	As of	As of	As of	As of	As of	As of	As of	As of	As of	As of	As of	As of
	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
4 Years	64%	62%	62%	60%	57%	58%	53%	52%	52%	51%	49%	49%	49%
5 Years	29%	31%	30%	33%	35%	38%	40%	42%	41%	42%	44%	42%	42%
6 Years	7%	6%	8%	6%	8%	4%	6%	6%	7%	7%	7%	9%	8%

**Table 10. Time to Degree Completion for Degree-Seeking Freshmen Who Graduate Within Six Years
University of Missouri - St. Louis**

Completed in:	Plateau = 14 SCH			Linear with Upper and Lower Division Rates				Straight Linear					
	Fall 1979	Fall 1980	Fall 1981	Fall 1982	Fall 1983	Fall 1984	Fall 1985	Fall 1986	Fall 1987	Fall 1988	Fall 1989	Fall 1990	Fall 1991
	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class
	As of	As of	As of	As of	As of	As of	As of	As of	As of	As of	As of	As of	As of
	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall	Fall
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
4 Years	na	na	40%	na	na	na	23%	31%	29%	27%	29%	26%	32%
5 Years	na	na	45%	na	na	na	58%	48%	50%	51%	51%	51%	50%
6 Years	na	na	14%	na	na	na	19%	21%	21%	22%	20%	22%	18%

Source: SSIP09R1

Note: Includes all students from the original fall cohort who graduated within six years of their first semester.

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Conclusion

The enrollment comparison between a plateau system and a linear system showed dramatic results. The distribution of SCH was much more top heavy in 1985, when the flat-fee policy was in effect. Under the plateau system, 74% of students at UMC were enrolled in fourteen or more SCH. This percentage dropped to 61% by 1991 and declined even further to only 55% by 1997. UM-St. Louis, where SCH distribution was already on the lower end in 1985, experienced a further shift to smaller student loads, especially in those taking between thirteen and sixteen hours. The figures at both campuses indicate that students had more incentive to take larger loads under the plateau policy.

Consequences of this incentive to take increased loads may be illustrated in Tables 9 and 10, which show time to degree completion for degree-seeking freshmen. Clearly, more students graduated in four years under a plateau fee structure than under the linear policy. Even though UM-Columbia has 90% of its students attending full-time, the number of students graduating in four years is much lower than it was under a plateau system with nearly the same proportion of full-time attendance. Even UM-St. Louis, where one would expect longer times to degree completion because of the large part-time enrollment, has also experienced far fewer students graduating in four years under a linear system than under the plateau system.

Shortened times to degree completion can be an advantage for the student, the state, and the institution. The obvious advantage for the student of graduating in less time is that the fewer years spent in school, the sooner he or she can get a job and start earning a salary. In the same respect, the state benefits from students graduating in less time as the state job market demands qualified candidates to be readily available. Finally, the institution could benefit from having students graduate in less time. Forecasts of large numbers of new high school graduates provide an opportunity for a college or university to attract more students. If the institution has a limited capacity and new construction is not an option, then one solution for making room for the influx of freshmen may be to move students through to graduation faster.

However, a fee policy which encourages acceleration also results in some subsidization of nonaccelerating students by those who choose to graduate earlier (Ihlanfeldt). A price must be paid for this subsidization either by raising the cost for the current or next generation of students or by increasing the number of students enrolled. Which of these options does an institution choose? Raising fees is certainly not a popular choice, and increasing enrollments just for the sake of preventing subsidization may raise concerns about overhead costs and the quality of students. The fee income differential model illustrated in Tables 7 and 8 may shed some light on this subject.

Despite its limitations, the model developed here demonstrates the likely effects of a fee policy change on revenue from student educational fees. Applying the student credit hour distribution of 1985 to the actual total enrollment of each subsequent year yielded the model number of SCHs. This resulted in larger numbers of SCH than were actually experienced. The fee rates to apply to SCHs were derived by taking the amount charged for a full-time load of fifteen hours in the linear policy and using it as the amount that would be charged for a full plateau system load of fourteen hours. This resulted in higher per credit hour rates than were actually assessed in the linear structure, but it covers the cost of acceleration by full-time students by placing a higher cost on those taking less than fourteen hours. Because the burden of subsidization is placed on the part-time student, the difference per SCH is much higher at UM-St. Louis than at UM-Columbia. The plateau fee policy favors institutions with a large full-time enrollment. If the plateau is set at fourteen credit hours, students must take at least fifteen hours to gain any advantage from the plateau system. Conversely, linear pricing favors those students who take credit hour loads of less than full-time. Students not interested in earning a degree but rather in taking classes to enhance particular skills may find a linear pricing structure better fits their needs.

The fee policy change in 1992 from a linear system with different rates for lower- and upper-division courses to an undifferentiated linear structure did not seem to have much of an effect on overall enrollment at either campus. The changes that did occur following the elimination of fee differentiation were slight and could very well be attributed to some factor other than a change in fee policy. The conclusions reached here focus on enrollment changes as direct results of changes in policy.

UM-Columbia, the traditional residential campus, appears to have been affected very little by the policy change of 1992 when differentiation was eliminated. The lower-division, upper-division and total mean loads varied by only 0.1 SCH from 1991 to 1997. The percentage of enrollment in upper-division courses initially increased in 1992, then began a decline that continued through 1996, and increased again in 1997. These results do not produce a sustaining trend, perhaps because students here have less choice over which division (upper or lower) they enroll in. Being mostly full-time students, they move along at a certain rate toward graduation, and it is inevitable that they take upper division courses in about their third year. Enrollment at UM-St. Louis, on the other hand, is mostly part-time and much more dependent upon economic conditions, so enrollment change could be expected from undifferentiating rates. UM-St. Louis experienced a slight increase in the mean load of upper-division courses, but a decrease in the percentage of enrollment at the upper level from 1993 to 1997. The increased student load at the upper level is not surprising. The lower cost of upper-level courses means students enrolled in the upper level should be able to afford more classes. However, the declining percentage of enrollment at the upper level does not follow this logic. One would typically assume that lower fees would increase accessibility for students, resulting in a larger enrollment in upper-division courses. However, this was not the observed behavior.

One of the reasons for differentiated prices, as cited by the 1991 Student Fee Task Force, was that lower rates for freshman/sophomore level courses would be more attractive to those who might be leaning toward attending a regional or community college. The 1994 study *Student Load and Tuition Policy Report* indicates that when differentiated pricing was initiated in 1986, the percentage of students enrolled in the lower level actually decreased at UMSL. Perhaps these results indicate that the fee rates of courses reflect the perceived quality of the courses. When the credit hour rate of lower-division courses was reduced, the perception may have been that the quality of the class was equal to that of a lower priced alternative. This gave the University campus no advantage over the alternatives. Students could choose to attend a community college for the first two years and, in the perception of the cost, get the same education as what they could have received at UMSL. When rates were undifferentiated in 1992, the

perception of the lower-division courses may have risen, resulting in the gradual increases each year in the percentage of enrollment at the lower level. Therefore, the decline in upper-division enrollment following undifferentiation does not suggest a negative result, but rather a positive change for lower-level enrollment.

The breakdowns of SCH by level and load in Tables 5 and 6 reveal a modest change in the proportions attending full-time and part-time. A closer examination of upper level enrollments shows that the fee policy change in 1992 may have caused a shift in the percentage of full-time attendance at the upper level. Because of the different natures of the campuses, the uniform change in fee policy had different effects at each campus, with each attracting a type of student atypical of the normal student body. The traditional campus (UMC) with primarily full-time enrollment saw a slight shift to more part-time attendance at the upper level. Students not attending college full time saw the fee policy change as an opportunity to take classes part-time at a lower cost, somewhat of a bargain price in comparison to the previous rate. The urban campus at UMSL, where part-time enrollment was the norm, experienced more full-time attendance at the upper level. Students who were already attending part-time saw the rate change as an opportunity to take more classes without significantly increasing their costs, moving their previous part-time status to full-time.

The Student Fee Task Force that recommended the change to an undifferentiated pricing structure for undergraduate classes cited simplification of the fee structure as its reason. In this respect it certainly met its goal. There can be no confusion as to which rate will be charged for any undergraduate class because there is only one rate. In addition, this linear structure, as a uniform change across the University system, did not seem to have much adverse effect on enrollment.

Each fee policy change did show some alteration, however slight in some instances, in enrollment behavior and fee revenue. Furthermore, these differences were definitely distinct between campuses, suggesting that perhaps educational fee policy decisions should be made in respect to campus-specific needs rather than through a system-wide policy. UM-Columbia and UM-St. Louis, by their location, size, and student compositions, are very different institutions. Policy at each campus should likewise be

different according to the needs and goals of the individual campus. Ihlanfeldt warns that the aims of an educational fee pricing system cannot be achieved unless the nature of the student body is considered. In addition, Ihlanfeldt states “there is no one desirable pricing policy for all institutions, but there is a single best pricing policy for each institution if the marginal costs and price supports are considered.”

In summary, the conclusions reached by the data analysis presented here are that a plateau pricing structure results in increased student credit hour loads, which in turn produces increased times to completion. The fee revenue subsidization caused by this acceleration can be controlled by increasing the burden on part-time students. However this may or may not be favorable to the institution or the students, depending upon whether attendance is primarily full-time or part-time. Differentiation of rates in the linear structure had little effect on either campus, but the small changes which did occur were opposite for each campus, indicating that fee policy changes do in fact have varying effects on campuses serving different types of students.

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